# Conclusions Regarding Rail Transit

The five transit alternatives studied in Tier 2 of the Capital Beltway Corridor Rail Feasibility Study are: Heavy Rail – Red, Heavy Rail – Blue, Light Rail – Red, Light Rail-Blue, and Monorail – Red.

1. **Mobility**
   All five alternatives would improve mobility in the corridor sufficient to warrant further investigation.

2. **Accessibility**
   The alternatives with more stations would generate higher ridership from within the study area and, therefore, offer greater accessibility to the corridor's residents and employees. The alternatives would not significantly improve accessibility for low-income and zero-car households in the region, as there are relatively few of them to serve in the corridor. The system would also attract few employees from elsewhere in the region as there are a relatively small number of low-income jobs to fill in the corridor.

3. **Maximize Existing System**
   All of the alternatives would serve approximately 70,000 to 80,000 total transit riders, of which approximately 20,000 would be new transit trips. The majority of the trips generated by each alternative would be made by existing riders. All of the alternatives would improve the quality of the trip for riders by reducing the length of their auto trips to access transit and making transit easier to use.

4. **Community Impacts**
   The alternatives with the most stations, light rail and monorail, would tend to offer better service to the activity centers. The environmental impacts identified in this study suggest no fatal flaws to the implementation of rail transit in the corridor.

5. **Optimize Financial Resources**
   The engineering issues identified in this study suggest no fatal flaws to the implementation of rail transit in the corridor. The implementation of any alternative, however, would entail a significant financial commitment.

6. **Capacity Considerations**
   All five alternatives would primarily serve through transit trips to and from the radial rail lines to the Rosslyn-Ballston Corridor of Arlington or the District of Columbia via the Metrorail Orange Line. This study indicates there would also be an increase in new transit ridership that may require additional capacity on the Orange Line.

7. **Most Feasible Alternatives**
   For each of the transit modes studied in Tier 2, the following are the most feasible alternatives for the corridor at this time. They are listed in no particular order:
   - Monorail – Red, with a rail connection to Maryland from Tysons Corner to be consistent with the mode employed by Maryland;
   - Heavy Rail – Red, with an additional station in the vicinity of the Braddock Road/Backlick Road intersection.; and

- Light Rail running on the Blue alignment south of Gallows Road and on the Red alignment north of Gallows Road.

**Recommendations - DRAFT**

**1. Advance the Capital Beltway Corridor Rail Feasibility Study to the alternatives analysis phase at an appropriate time**

The Policy Advisory Committee agrees with the conclusion that for each of the transit modes studied in Tier 2, the following are the most feasible alternatives for the corridor at this time. . The alternatives are listed in no particular order: Monorail – Red, with a rail connection to Maryland from Tysons Corner and consistent with the mode employed by Maryland; Heavy Rail – Red, with an additional station in the vicinity of the Braddock Road/Backlick Road intersection; and Light Rail running on the Blue alignment south of Gallows Road and on the Red alignment north of Gallows Road. All of the alternatives are feasible for the reasons stated in the Capital Beltway Rail Feasibility Study Final Report. However, the Policy Advisory Committee would like to point out the following specific comments with respect to each of the alternatives:

Monorail-Red with a rail connection to Maryland from Tysons Corner to be consistent with the mode employed by Maryland: The Committee recognizes that this alternative is feasible; however, at this time, suspended-monobeam is an immature technology and is largely unproven in a long suburban corridor. Furthermore, the particular suspended-monobeam system examined in this study is still in the developmental stage and requires full-scale development and testing to verify assumptions used in this study. Futrex, the system developer, has received a grant to advance this technology and other manufacturers of monorail systems do exist. Consequently, in light of the anticipated implementation schedule, monorail is a feasible technology for the Capital Beltway Corridor.

This alternative would generate the highest ridership of those studied, offer the greatest number of stations and therefore access to the system, and produce the least impact on the environment.

Heavy Rail – Red with an additional station in the vicinity of the Braddock Road/Backlick Road intersection: The Committee recognizes that this strategy is feasible but is significantly more expensive; requires greater analysis of the geotechnical issues, and noise and vibration impacts; and could have greater community impacts during the construction phase.

This alternative would carry passengers the length of the study corridor in the shortest period of time, operate compatibly and interchangeably with the existing heavy rail Metro system, and form a focus for development in the activity centers through which it passes.

Light Rail running on the Blue alignment south of Gallows Road and on the Red alignment north of Gallows Road: The Committee recognizes this alternative is feasible but is concerned that this strategy has the highest number of potential impacts on private property, greater potential impacts on environmentally sensitive areas, and potentially conflicts more with Fairfax County's Comprehensive Plan where stations are built outside of activity centers. Further study also needs to be conducted on operational issues associated with running light rail on surface streets.

This alternative would generate ridership comparable with other alternatives but at a lower cost.

**2. Perform Similar Feasibility Studies for Other Rail Projects in Northern Virginia**

Northern Virginia 2020 Transportation Plan has identified and recommended rail projects in several other corridors (i.e., Route 28, Route 7, Route 1, and Columbia Pike) that should be evaluated. Some of these projects are identified in the plan for implementation in the 2010 timeframe. In order to provide coordination among all projects, feasibility studies for all rail projects in the Northern Virginia 2020 Transportation Plan should be performed. These studies would be used to validate rail projects, establish priorities, and compare cost benefits.

**3. The Inter-relationship Between Land Use And Transit Should Be Further Examined**

The Transportation Coordinating Council of Northern Virginia recently completed the Alternative Transportation and Land Use Activity Strategies Study. The purpose of the study was to review the interdependence of transportation and land use, and recommend guidelines for implementing 2020 plan improvements. Federal funding policies also encourage appropriate land use planning when looking at transit. Therefore, this study, along with smaller land use studies conducted in the Corridor (i.e., Merrifield, Annandale, and Springfield), should be closely examined in order to make appropriate decisions regarding the future of land use and transit in the Northern Virginia and the Capital Beltway Corridor. What about the point that Federal criteria requires land use planning?

**4. Coordinate Highway And Transit Improvements In The Beltway Right-of-Way**

Generally, it is not necessary to use the Beltway right-of-way to implement rail transit in the corridor. Parts of all five alternatives were developed adjacent to the Beltway right-of-way, however, all five alternatives could make use of any right-of-way not required for the highway. Any widening of the Capital Beltway should be constructed so as not to preclude transit in the corridor. Specifically, accommodations should be made for the piers of structures that would carry transit over I-495. Coordination with VDOT on the Capital Beltway EIS is critical and should be continuous throughout implementation of any transit and/or highway improvements in the Capital Beltway Corridor.